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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,469	01/27/2004	Joseph Sun	4425-345	1145

7590

09/30/2005

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EXAMINER

HAFIZ, MURSALIN B

ART UNIT	PAPER NUMBER
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2814

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/764,469	Applicant(s) SUN ET AL.	
	Examiner Mursalin B. Hafiz	Art Unit 2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 13-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election of claims 1-12 in the reply filed on August 26, 2005 is acknowledged.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al (US 6,562,217).

Regarding claim 1, Tanaka discloses in Fig. 50, a package of a semiconductor device with a flexible wiring substrate, comprising:

a semiconductor substrate [IC chip] with at least one pad [aluminum electrode] on a surface thereof;

a bump [gold bump] bonded to said pad [aluminum electrode];

an adhesive layer [conductive resin fine particle] on said bump [gold bump]; and

a flexible wiring substrate [substrate] having at least one contact section [substrate electrode] being electrically connected with said bump [gold bump] by said adhesive layer [conductive resin fine particle].

Regarding claim 2, Tanaka discloses in Fig. 50 a stud bump [gold bump].

Regarding claim 3, Tanaka discloses in Fig. 50 a gold stud bump [gold bump].

Regarding claims 4 and 5, discloses an adhesive layer that includes non-conductive paste [resin, column 5 line 10]

Regarding claims 6 and 7, Tanaka discloses an adhesive layer that includes anisotropic conductive paste [conductive resin fine particle, column 5 line 10].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al (US 6,562,217) in view of Hamamoto et al (US 6,800,836 B2).

Regarding claim 8 and 9, Tanaka met all the claim limitations including an IC chip but did not teach that the IC chip had image sensors on the surface thereof having said pad and a transparent plate covered on the surface of said semiconductor substrate having said image sensor. However, Hamamoto teaches in Fig 4 and 7B, a semiconductor substrate [1] having image sensors [100] on the surface thereof having said pad [103] and a transparent plate [2] covered on the surface of said semiconductor substrate having said image sensor [100]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate Hamamoto's device into Tanaka's device at least to use Tanaka's device as an image pick up device. Note that IC chip is a generic term which includes all kinds of integrated chip, and Image sensor is one kind of integrated chip.

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Regarding claim 10, Tanaka discloses in Fig. 50 a stud bump [gold bump].

Regarding claim 11, Tanaka discloses an adhesive layer that includes anisotropic conductive paste [conductive resin fine particle, column 5 line 10].

Regarding claim 12, Tanaka discloses an adhesive layer that includes non-conductive paste [resin, column 5 line 10]


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mursalin B. Hafiz whose telephone number is 571-272-0237. The examiner can normally be reached on m-f 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mbh


GEORGE ECKERT
PRIMARY EXAMINER